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ABSTRACT

Following the enactment of the New York State standardized admissions testing law, students taking the Scholastic Aptitude Test (SAT) in New York acquired the right to request a copy of test questions used in calculating their scores, a copy of their answer sheet, and various interpretive materials. This study examined (1) the differences between examinees who requested these disclosure materials and those who did not, and (2) the differences between different examinee sub-populations in the likelihood of their requesting disclosure materials. For each of the March, May and June 1980 New York administrations, a data set was prepared that contained data for all requestors (4.77 percent of all test takers for the three administrations) and for a random sample of nonrequestors. Analysis showed that requestors came from wealthier, more educated families; that requestors were more academically achieving than nonrequestors; and that requestors reported higher academic aspirations than nonrequestors. The likelihood of requesting disclosure differed both among different ethnic groups and across the two SAT administrations. Speculations that test disclosure materials might be disproportionately utilized by already advantaged groups and by those for whom the materials would have a direct utility (retesting, etc.) were largely confirmed by the findings. (Author/PN)

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College Board Report

No. 82-3

Student Characteristics and the Use of the SAT Test Disclosure Materials

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ABSTRACT

Following the enactment of the New York state standardized admissions testing law, students taking the Scholastic Aptitude Test (SAT) in New York acquired the right to request and receive a copy of test questions used in calculating their scores, a copy of their answer sheet, and various interpretive materials. The purpose of this study was to examine (1) the differences between examinees who requested these disclosure materials and those who did not, and (2) the differences between different examinee subpopulations in the likelihood of their requesting disclosure. For this study, the records of all New York SAT examinees who reported scores were extracted from the full SAT data files following the March, May, and June 1980 administrations, which were the first three administrations after the enactment of the legislation. For each administration, a data set was prepared that contained data for all requestors (4.77 percent of all test takers for the three administrations) and for a same-size random sample of nonrequestors. Several analyses were undertaken.

The first question of interest was answered by univariate comparisons between requestors and nonrequestors that showed significant differences on the majority of indicators available from the Student Descriptive Questionnaire and the registration form, and on SAT verbal and mathematical scores. Because so many differences were observed, linear multiple regression analyses were conducted, with requestor status the dependent variable. These analyses, which were undertaken to reduce the number of discriminating variables, showed among other things that requestors came from wealthier, more educated families; that requestors were more academically achieving than nonrequestors; and that requestors reported higher academic aspirations then nonrequestors. Categorical indicators of these variables were selected for subsequent analysis.

The second question, regarding differences in the likelihood of requesting disclosure for different examinee subgroups, was answered by a multiple contingency table analysis of the effects on requesting disclosure of ethnic identification, parental education, parental income, academic achievement, and academic aspirations considered simultaneously. For this analysis, only the March and May administration cohorts were of sufficient size to be analyzed. Significant differences in both raw and adjusted odds-ratios were found between examinee subgroups within each of these categories. Within category, those most likely to request were examinees who were not seeking financial aid for college attendance, had fathers with advanced degrees, achieved higher SAT mathematics scores, reported having higher class rank, and aspired to a doctoral or professional degree. The likelihood of requesting disclosure differed both among different ethnic groups and across the two SAT administrations. Following the March SAT administration, black examinees and other non-Asian minority examinees were less likely than white examinees to request disclosure, while Asian examinees were more likely to request disclosure materials than were white examinees. Following the May administration, however, all ethnic minorities were more likely than white examinees to request disclosure materials.

1. INTRODUCTION

Enactment of the New York state standardized admissions testing law,[1] requiring public disclosure of standardized college and graduate admissions test forms administered in New York, provided each examinee with the right to acquire a copy of all test questions used in calculating his or her raw score, his or her answer sheet together with a copy of the correct answer sheet for the same test with questions counting toward the examinee's raw score so marked, and a statement of the raw score used to calculate the scores already sent the examinee (Brown 1980). In compliance with this legislation, the College Board offered students taking the Scholastic Aptitude Test (SAT) in New York after January 1, 1980, a test disclosure materials package containing the two SAT-Verbal and the two SAT-Mathematical sections that were the basis of their SAT scores, the correct answers, and a copy of their answer sheets.[2] The package was made available to examinees who requested it. The purpose of this study was to examine (1) differences between examinees who requested disclosure and those who did not and (2) differences in the probability of requesting disclosure for different examinee subpopulations.

Prior to the enactment of the New York state standardized admissions testing law, a vigorous debate between the advocates and critics of disclosure legislation was carried on. This debate addressed four areas of concern that have beeen discussed in detail (Brown 1980, Strenio 1979, and Welcher 1981): the need for disclosure, the potential consequences of disclosure, technical considerations, and the legality of the legislation. One point that was not considered, except peripherally, was the examinee's demand for disclosure: that is, a consideration of who actually would seek disclosure materials and under what conditions the materials would be sought.

This is not to say that the debate ignored consumer issues related to disclosure. On the contrary, both proponents and critics of disclosure argued that their respective positions favored the consumer. Test developers and their supporters pointed out that the necessity of creating more new test forms would penalize consumers by driving test prices up and possibly by affecting test validity (Ravich 1979). Test critics argued that publication of the tests

1. The New York Education Law, § § 340-347 (McKinney Supp. 1979-1980).

2. In Spring 1981 the College Board announced that SAT test disclosure materials would be made available to examinees, world wide, who took the SAT at several major administrations beginning with the 1981-82 testing year. For selected administrations of the SAT, disclosure materials would not be made available.

would "demystify" testing and would rid tests of cultural, racial, and sex biases (Brownstein and Nairn 1979). One implicit assumption of the test critics' point of view was that women and members of ethnic minority groups would be particularly likely to seek disclosure materials, in the interest of indentifying bias. An implicit assumption of the test developers' position was that the cost of the materials might serve as a disincentive to examinees from lower-income families; because of this assumption, provision was made to waive the fee for disclosure materials for examinees whose SAT fees had been waived. By failing to consider the demand for disclosure, little attention was paid to the reasonable assumption that such demand would vary within the examinee population.

The authors of this study assumed that the examinees' demand for the SAT test disclosure materials would be determined first by their knowledge regarding the availability of the materials, second by their perceptions of the value of the materials, and third by cost constraints; such factors could be mediated by certain individual, family, school, and regional characteristics. Knowledge was assumed to be a factor determining demand because, during the first six months of 1980, announcements regarding the availability of the materials were not contained in the student information bulletin, and order forms were typically distributed through high school guidance offices. From the examinees' viewpoint, disclosure could have value for score verification, for retest preparation, and/or for satisfaction of curiosity regarding the test. Thus it was predicted that the use of the SAT test disclosure materials would be greatest, other things being equal, by examinees who were aware of the materials (perhaps those from families with higher levels of education), by those who suspected an error in scoring (particularly those with marginal scores), by those who intended to retake the test, by people with a particular interest in the language or content of the tests (those interested in ethnic bias in the test, for example), and by those for whom the cost of ordering the materials ($4.65) was not burdensome. Because this study was exploratory, these speculations were not stated as formal hypotheses. They were notions, however, that guided this research.

The remainder of this paper is organized as follows: Section 2 describes the data that are analyzed; Section 3 presents the results of univariate and multivariate comparisons between requestors and nonrequestors; Section 4 presents estimates of the likelihood of requesting test disclosure among various population subgroups; in Section 5 the summary and conclusions are presented.

2. PROCEDURE

Sample

A total of 113,695 students took the SAT in New York in the first six months of 1980. Of these, 5,419 (4.77 percent) requested the test disclosure materials provided by the College Board's Admissions Testing Program (ATP). The numbers of examinees and requestors for each administration were: 31,546 examinees and 2,341 (7.42 percent) requestors in March, 45,294 examinees and 2,440 (5.39 percent) requestors in May, and 36,855 examinees and 638 (1.73 percent) requestors in June. For this study, the records of all New York SAT examinees for whom scores were reported were extracted from the full ATP-SAT data files for the March, May, and June 1980 administrations. These data were selected because they represented the first SAT administrations in New York that were affected by the New York law. For each administration, three sets of data were merged: SAT scores reported, Student Descriptive Questionnaire (SDQ) information, and data on whether or not the examinee requested test disclosure materials. For each administration, a data set was prepared that contained data for all requestors and for a same-size random sample of nonrequestors. Identifying information about the examinees was removed from the files before data were released for research.

Data Completeness

The three data sets that were merged to form the data set to be analyzed for each administration cohort varied in completeness. The records of all examinees were complete regarding whether or not they had requested the SAT test disclosure materials. Similarly, SAT scores were available for all examinees. Grade and sex information was available for all but a minute fraction of the examinees. The major portion of the information regarding examinee characteristics, however, was obtained from the SDQ, a 60-item voluntary survey of test registrants. Although complete records were available for only about 50 percent of the examinees, the response rate to individual items averaged about 80 percent. The items on the SDQ provided information regarding the examinee's high school environment, academic background, grades, school and community activities, academic aspirations, expectations about college, ethnic identification, parental education and income, family size, perceived abilities, college major, and career choice. A list of the variables derived from the SDQ and their definitions are prvovided in Table 1. (See the back of the booklet for all Tables.)

Analytic Methods

The purpose of this study was, first, to identify the differences between examinees who requested disclosure, "requestors," and those who did not request disclosure, "nonrequestors," and, second, to estimate the likelihood of requesting disclosure for different candidate subpopulations.

To answer the first question, two analyses were undertaken: (1) a univariate comparison of requestors with nonrequestors on all variables contained in the merged data

sets, and (2) multiple regression analyses, using requestor status as the dependent variable and examinee characteristics as the independent variables, to sort out the independent relationships between examinee characteristics and requestor status and to screen variables for subsequent analyses.

To answer the second question, a multiple contingency table analysis of seven critical categorical variables was used to estimate a logistic regression, with requestor status as the dependent variable. Each of these methods will be discussed separately in the following section.

3. COMPARISONS BETWEEN REQUESTORS AND NONREQUESTORS

This section discusses the results of the analyses that were conducted to answer the first basic question of this inquiry: What were the differences between examinees who requested disclosure and those who did not request disclosure, following the March, May, and June 1980 SAT administrations in New York state? A related question was: How consistent were these differences?

Univariate Comparisons

Ninety-one variables, described in Table 1, were derived from data on the merged records. By administration cohort, requestors were compared with nonrequestors on each of these variables. In all, 273 comparisons were made; statistically significant ($p < .05$) differences between requestors and nonrequestors were found for 208 (76.2 percent) of these comparisons. Variables that distinguished requestors from nonrequestors were highly consistent across administration cohorts. Fifty-nine (64.8 percent) of the 91 variables showed statistically significant ($p < .05$) differences between requestors and nonrequestors for all three administration cohorts; another 12 variables (13.2 percent) consistently revealed no differences between requestors and nonrequestors for all three cohorts. Table 2 lists all 71 variables having consistent patterns across the three administration cohorts and describes the differences and similarities observed. Because the number of variables on which requestors and nonrequestors differed was so great, in the remainder of this section the authors chose to provide more detailed numerical comparisons for only a small number: all demographic and background variables, all school environment variables, and three academic achievement variables.

Demographic and Background Differences

In addition to data on the examinee's sex, obtained for all examinees from the registration form, information regarding the examinees' background was derived from seven questions of a demographic nature contained in the SDQ:

1. How do you describe yourself (ethnic identity)?
2. Is English your best language?
3. Indicate the highest level of education completed by your father or male guardian.
4. Indicate the highest level of education completed by your mother or female guardian.
5. How many persons are dependent on your parent(s) or legal guardian for financial support?
6. What was the approximate income of your parents before taxes last year?
7. Do you plan to apply for financial aid at any college?

Table 3 presents summary statistics for requestors and nonrequestors on all eight variables for the March, May, and June administrations. The largest consistent differences between requestors and nonrequestors were found for parental education, income, and family size. The educational attainment of both the mothers and the fathers of requestors was significantly higher than that of the mothers and fathers of nonrequestors (adjusted pooled chi-square[3] (APC) = 24.08 and 30.60, respectively, $p < .0001$). Ethnic differences appeared in the data for all administrations, but the strength of this difference diminished from March, APC = 100.17, $p < .001$, to May, APC = 31.53, $p < .001$, to June, APC = 19.61, $p < .005$. Nearly twice as many requestors as nonrequestors had fathers and mothers with graduate or professional degrees. This was the modal category for the educational attainment of the fathers of requestors; by comparison, the modal category of educational attainment for both the mother and the father of nonrequestors was the attainment of a high school diploma. The family income of requestors was, on the average, more than $6,000 greater than that of nonrequestors for all three administrations. A larger proportion of nonrequestors intended to seek financial aid for college, APC = 50.01, $p < .001$. Requestors also tended to come from somewhat smaller families than did nonrequestors, APC = 42.13, $p < .001$. By comparison, differences between requestors and nonrequestors in sex and English language ability were not found for all cohorts; the APCs for these variables were also substantially smaller (APC = 3.40, $p < .05$ and APC = 2.44, $p < .10$, respectively).

School Environment Differences

In addition to data on the examinee's grade level, obtained for all examinees from the registration form, information regarding the examinee's school environment was obtained from three questions on the SDQ:

3. The adjusted pooled chi-square (APC) is obtained by summing the chi-square values across the three administration cohorts and dividing the result by the sum of the degrees of freedom. Since the sample sizes are approximately the same for all variables within a cohort, the APC is a standardized measure of the magnitude of the differences between requestors and nonrequestors on each variable. The p-value for an APC is obtained by referring the summed chi-square value to a chi-square table using the sum of the degrees of freedom.

1. What kind of high school are you attending?
2. About how many students are there in your high school class?
3. Which of the following best describes your present high school program?

Table 4 presents summary statistics for requestors and nonrequestors on all four variables for the March, May, and June administrations. A larger proportion of requestors than of nonrequestors were eleventh graders, APC = 162.09, $p < .001$, and were enrolled in college-preparatory programs, APC = 100.14, $p < .001$. The requestor-nonrequestor difference was inconsistent across administrations and smaller for both the kind, APC = 4.51, $p < .05$, and size, APC = 12.29, $p < .01$, of high school attended.

Academic Differences

Academic variables included scores for all examinees on the SAT-Verbal and SAT-Mathematical sections of the SAT, as well as three indicators of achievement derived from the SDQ: most recent high school class rank, latest year-end or midyear grade in English, and latest year-end or midyear grade in mathematics.

Table 5 presents summary statistics for requestors and nonrequestors for these variables for the March, May, and June administrations. Requestors scored higher than nonrequestors on both the verbal and the mathematical sections of the SAT, held higher self-reported class rank than nonrequestors, and reported achieving higher grades in mathematics and English than did nonrequestors. The modal category for self-reported grades in English and mathematics was "A" for requestors and "B" for nonrequestors.

Other Differences

As noted above, requestors differed from nonrequestors in their responses to the majority of items on the SDQ. These items included indicators of academic expectations, of social and athletic participation in high school, of honors received in high school, of academic aspirations, and of self-perceptions, all of which are likely to be correlated with grade and social class.

Because the univariate analyses revealed that overall more requestors (96.7 percent) were eleventh graders than were nonrequestors (86.9 percent) and that there were sizable differences between the parental education and income of requestors and the parental education and income of nonrequestors, further examination of these other variables is deferred to the multivariate analyses in the next section, in which the confounding effects of background and grade level are statistically controlled.

Multivariate Comparisons

The purpose of the multivariate comparisons was twofold: first, to determine which variables were independently related to requestor status, net of grade and background characteristics; and, second, to identify a limited number of variables to be included in a logistic regression to predict requesting from examinee characteristics.

From the univariate comparisons described in Table 2, it is evident that requestors differed from nonrequestors on a wide variety of characteristics, including background, school environment, academic achievement, academic expectations, social and athletic high school activities, high school honors received, academic aspirations, and self-perceptions. Since such characteristics are frequently intercorrelated, the unique contribution of each variable to an examinee's decision to request disclosure is best estimated by a multiple regression in which the effects of certain variables are examined, while others are statistically controlled. With a dichotomous dependent variable such as requestor status, a logistic rather than linear regression is preferred. Technical and financial considerations, however, suggested the use of a linear regression as a screening device for limiting the number of variables to be included in a logistic regression. The following discussion is mindful of the limitations of the linear model; in a subsequent section the variables identified here are used in a logistic analysis.

The variables available for analysis were numerous, temporally orderable, logically interrelated, and frequently colinear. The multiple regression analyses were organized in such a way as to take these factors into account. First, where questions on the SDQ appeared to be measuring an underlying construct such as "academic aspirations," the responses were combined into a single index; these indexes are described in detail in the following paragraphs. Second, to take temporal and logical factors into account, the researchers ordered the variables according to a block recursive model, starting with exogenous characteristics and moving sequentially through the blocks of explanatory variables. Figure 1 illustrates the causal structure. The variables in the box on the left—student background characteristics—are entirely exogenous and are assumed to affect requesting disclosure directly. The variables in the next box—school environment variables—are assumed to be determined by student background characteristics and to affect requesting disclosure in combination with them. The variables in the third box—student achievement variables—are assumed to be determined by both student background and school environment variables and to affect requesting disclosure in combination with them. The variables in the fourth box—other student characteristics—are assumed to be determined by the first three sets of variables and to affect requesting disclosure in combination with them.

The names and definitions of the variables used in the multiple regression analyses are presented in Table 6; the means and standard deviations are presented in Table 7 separately for each administration. Complete data were available for only about half of the sample for each administration: for March, N = 2,372 (50.7 percent); for May, N = 2,568 (52.6 percent); for June, N = 709 (55.6

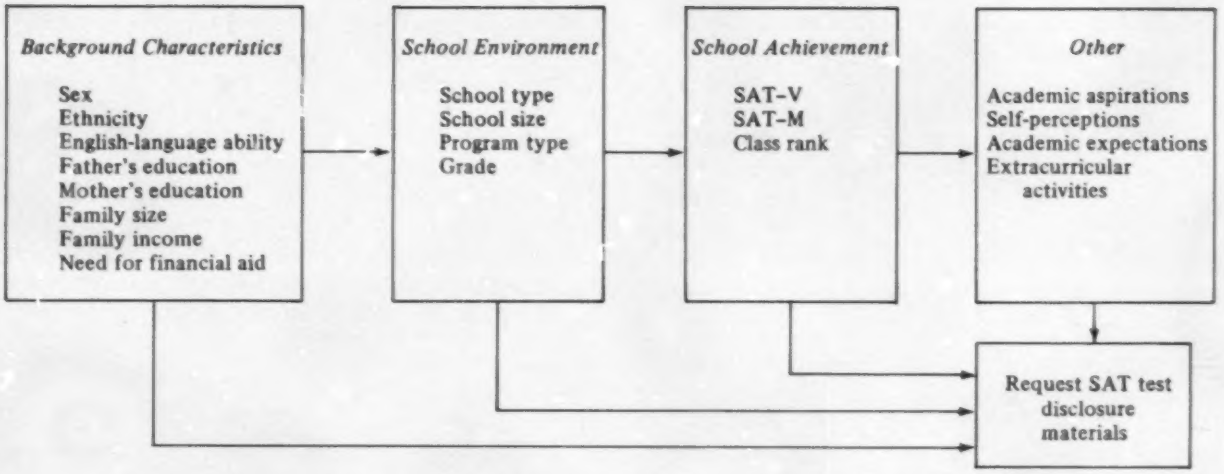

Figure 1: Factors influencing examinee requests for SAT test disclosure materials.

percent). An inspection of the means and standard deviations of the variables suggests that complete data sets were available for slightly higher-achieving examinees.

Demographic and Background Differences

Table 8 reports the results of the linear multiple regression analysis of requestor status and examinee background characteristics. Background characteristics consisted of indicators and measures of sex, ethnicity, English-language ability, parental education, family income, and family size. Analyses for each administration cohort are reported separately. From this table it is evident that certain characteristics continued to distinguish requestors from nonrequestors for all three administrations. Requestors were more likely than nonrequestors to come from wealthier families and to have better-educated parents. In addition, requestors were more likely to report an Asian ethnic identity. In these analyses, sex, non-Asian ethnic identity, English-language ability, family size, and need for financial aid were not consistently and independently related to requestor status. For the March and May administration cohorts, requestors were more likely to come from smaller families.

School Environment Differences

Table 9 reports the results of the linear multiple regression analysis of requestor status and school environment, controlling for background characteristics. Four measures of school environment were analyzed: school type, school size, type of high school program, and examinee grade level. From this table it is evident that, for the most part, school environment variables were unrelated to requestor status. For the March and May administration cohorts, requestors were more likely to be enrolled in an academic or college-preparatory high school program and were less likely to be high school seniors or college-level students.

Achievement Differences

Table 10 reports the results of the linear multiple regression analysis of requestor status and student achievement, controlling for background and school environment variables. Three achievement-related variables were analyzed: scores on the verbal sections of the SAT, scores on the mathematical sections of the SAT, and class rank. Self-reported class rank was the only variable consistently related to requestor status for all three administration cohorts. SAT-Mathematical scores were related to requestor status for the March and May administration cohorts.

Other Differences

Four other differences between requestors and nonrequestors were explored: differences in academic aspirations, differences in self-perception of ability, differences in academic expectations, and differences in participation in extracurricular activities. Table 11 reports the results of the multiple regression analyses of these variables, with background, school environment, and achievement statistically controlled.

Academic Aspirations. Academic aspirations were operationalized as the response to a question on the SDQ that asked about the highest level of education that the examinee planned to complete beyond high school. The alternatives ranged from a "two-year specialized training program" to a "doctor's or other professional degree." A dichotomous indicator of doctoral or professional degree plans was constructed from the responses to this item. Table 11 shows that, other variables held constant, the only variable consistently related to requestor status was academic aspirations. This result is consistent with the finding of the univariate comparison that more requestors aspired to doctoral and professional degrees than did nonrequestors.

In the univariate comparison, the researchers found that requestors differed from nonrequestors on a second indicator of academic aspirations. This indicator was the aspiration to attend a highly selective undergraduate institution. These institutions were defined by three characteristics. First, they were four-year institutions identified by Cass and Birnbaum (1979), Astin and Solomon (1979), or the Higher Education Research Institute for public institutions (1978) as "most selective" or "highly plus selective." Second, the combined average SAT-Mathematical and SAT-Verbal scores of the 1978 entering freshman was greater than 1,200 (Cass and Birnbaum 1979). Third, the institution accepted fewer than 50 percent of its applicants (Matheson 1979). A total of 26 such institutions were identified.[4] Candidates who had SAT scores reported to any one of these institutions were coded as having aspirations to a highly selective institution. Overall, only 8.6, 9.6, and 8.2 percent of the examinees from the March, May, and June administration cohorts, respectively, had had their scores reported to any of these institutions. Only for the May administration was there a relationship between aspiration to a highly selective institution and requestor status.

Self-Perceptions. Self-perceptions of ability were operationalized as the responses to 14 items on the SDQ that asked examinees to rate themselves on how they felt they compared with other people of their age, in several areas of ability: acting ability, artistic ability, athletic ability, creative writing, getting along with others, leadership ability, mathematical ability, mechanical ability, musical ability, organizing work, sales ability, scientific ability, spoken expression, and written expression. Univariate comparisons revealed consistent statistically significant differences between requestors and nonrequestors for all but two of these self-perceptions: artistic ability and athletic ability (see Table 2). In all cases, requestors' self-ratings were more positive than those of nonrequestors. For the multiple regression analysis, the examinees' self-ratings on each of these ability areas were combined into a single index of self-perception, with the highest rating, "in the highest 1 percent," assigned the value of one, and the lowest rating, "below average," assigned the value of five. Table 11 indicates that there was no relationship, consistent or otherwise, between this measure of self-perceptions and requestor status, holding constant background, school environment, and achievement variables.

Academic Expectations. Academic expectations were operationalized as the examinee's response to six items regarding the number of years of study before high school graduation that the examinee expected to complete in English, mathematics, foreign languages, biological sciences, physical sciences, and social studies. Univariate comparisons showed consistent and statistically significant differences between requestors and nonrequestors for all but two of these items: expected years of study in English and expected years of study in social studies. In all cases, requestors anticipated more years of study than did nonrequestors (see Table 2). For the multiple regression, an index of academic expectations was computed by summing the years of expected study across all six subject-matter areas. The multiple regression analysis reported in Table 11 shows no consistent differences in academic expectations between requestors and nonrequestors, statistically holding constant background, school environment, and achievement variables.

Participation in Extracurricular Activities. Participation in extracurricular activities was operationalized as the examinee's response to an item on the SDQ that asked whether or not the student had participated in ethnic or racial activities or organizations, journalism, debating or dramatic activities, art, music or dance, preprofessional or departmental clubs, religious activities or organizations, social clubs or community organizations, and student government.

Univariate comparisons showed that requestors differed consistently from nonrequestors on all but two of these types of extracurricular activities, requestors participating more than nonrequestors (see Table 2). For participation in high school athletics, no differences were found for all three administration cohorts, whereas for participation in high school art, music, or dance activities, differences were not found consistently for all cohorts. An index of participation in extracurricular activities was computed by summing the number of different kinds of activities in which the examinee indicated that he or she had participated. Table 11 shows that requestors from the March and May administration cohorts participated in more extracurricular activities than did nonrequestors.

4. LIKELIHOOD OF REQUESTING DISCLOSURE FOR DIFFERENT EXAMINEE SUBPOPULATIONS

In this section the authors discuss the results of the analyses that were conducted to answer the second basic question of this inquiry: What were the differences in the likelihood of requesting test disclosure among various population subgroups?

Rationale for the Use of Multiple Contingency Table Methods

The questions of interest in this section concern the way the likelihood of requesting disclosure varies across groups of individuals who differ along various dimensions, such as race, sex, or SAT score. This kind of study is called retrospective because it samples the values of the dependent

4. A list of these institutions may be obtained from the primary author on request.

variable (that is, requesting disclosure or not doing so) rather than sampling the values of the various independent variables.

The retrospective design puts certain constraints on what can be found out about the likelihood of requesting disclosure. In particular, for example, the overall proportion of requestors and nonrequestors in the data is determined by the size of the samples of each group that are obtained. Thus the overall "requesting rate" is fixed by the study design and does not represent the requesting rate in the population. However, the "requesting rate" of one group of examinees relative to another is not fixed by the study design, and it can be estimated by the data. To clarify this assertion consider the hypothetical table of data given in Table X.

Table X. Requestor Status by Characteristic A

	Characteristic A		
Requestor Status	*1*	*2*	*Total*
Requestor	700	200	900
Nonrequestor	500	400	900

In Table X 900 requestors and 900 nonrequestors have been classified by the values of a dichotomous factor "A" (for example, sex). The "odds for requesting" when A = 1 is 700/500 = 1.4, whereas the "odds for requesting" when A = 2 is 200/400 = 0.50. Cornfield (1956) showed that when the row totals in Table X are fixed, the correct parameter to estimate is the odds-ratio:

$$\text{odds-ratio} = \frac{\text{"odds for requesting" when A = 1}}{\text{"odds for requesting" when A = 2}} = \frac{1.4}{0.5} = 2.8$$

It can be concluded that examinees were 2.8 times more likely to request disclosure when A = 1 than when A = 2. When one takes an odds-ratio relative to A = 2, it is said that A = 2 is the "base category." The odds-ratio is correctly estimated in both the retrospective study (when the rows of Table X are fixed by the design) or in the prospective study (when the columns of Table X are fixed by the design). No other parameter—such as differences or ratios of percent requesting—can be correctly estimated in a retrospective study, even though such parameters can be correctly estimated in a prospective study.

In retrospective studies it is important to distinguish between *raw* odds-ratios and *adjusted* odds-ratios. The raw odds-ratios are computed just as was done in Table X. However, these odds-ratios do not take into account the confounding effects of other independent variables. *Adjusted* odds-ratios do take into account the simultaneous effect of all of the measured independent variables. It is beyond the scope of this paper to go into the details of the computation of adjusted odds-ratios. This branch of multivariate analysis is described in detail in Bishop, Fienberg, and Holland (1975).

In broad outline, the procedure for obtaining the adjusted odds-ratio is as follows. First, a multidimensional cross-tabulation is formed which has as many dimensions as there are independent and dependent variables. Next, this table is analyzed by using log-linear models to find one that adequately represents the data. Finally, the "fitted values" from a model that fits the data are used to compute the adjusted odds-ratio for each independent variable. In this study satisfactory fits were obtained using models that had additive logit structures. The results obtained here are equivalent to performing a logistic regression analysis with a dichotomous indicator of requestor status as the dependent variable and with dummy variables corresponding to the cell classifications.

Results of the Multiple Contingency Table Analysis

In earlier analyses, because the number of variables on which requestors differed from nonrequestors was so large, variables were grouped into four categories: background characteristics, school environment differences, academic differences, and differences in attitudes and activities. These general categories guided the selection of variables for the multiple contingency table analysis, which was limited to about a half-dozen variables, contingent on the number of categories of each variable.

An initial decision was made to include at least one variable from each of the four general categories. Background variables selected for inclusion were ethnic identity, father's education, and reported need for financial aid as a proxy for family income. The school environment variable selected for inclusion, grade level, was not included as a variable but was used to limit the sample to eleventh-grade examinees only, since they made up the vast majority of the examinees in the three cohorts (87.9 percent of the March cohort, 95.4 percent of the May cohort, and 92.9 percent of the June cohort). Two academic variables were selected: class rank, representing achievement within a given high school, and SAT-Mathematical score, representing achievement across high schools. Finally, an indicator of academic aspirations, aspiration to a doctoral or professional degree, was included. Categorical indicators of each of these variables were constructed using measures with the fewest missing data. The names and definitions of the variables used in this analysis appear in Table 12.

The multiple contingency table analysis was conducted on a six-way cross-tabulation of ethnic identification (four categories), need for financial aid (two categories), father's education (four categories), class rank (four categories), SAT-M score (five categories), and educational aspirations (two categories). Since this gave rise to a 2,560-cell table, the analysis was restricted to the March and May adminis-

tration cohorts, each of which contained sufficient observations (i.e., more cases than cells); the June administration cohort was considered too small. Complete data were available for 67.2 percent of the May cohort (N = 3,279) and 58.7 percent of the March cohort (N = 2,749). Summary statistics comparing this sample with the general samples, by administration, appear in Appendix A.

Searching among log-linear models for those that adequately represented the data, the researchers found adequate fits using "no-three-or-higher-way" interaction models. (Fit was tested by using the nested likelihood ratio tests as well as by an examination of cell residuals.) Values from the "no-three-or-higher-way" interaction model were used to compute adjusted odds-ratios for each of the six independent variables.

Table 13 summarizes the results of the analysis, separately for March and May administration cohorts. The numerical entries in each column are the estimated odds-ratios for the likelihood of requesting disclosure as a function of the values of the six independent variables described in Table 12. The base category for each variable is indicated by the value 1 as the entry; its label is italicized. Both the raw odds-ratio and the adjusted odds-ratio appear in this table, making evident the influence of other variables on the raw odds-ratios. When the raw and adjusted odds-ratios differ, the adjusted odds-ratio gives a more accurate measure of the individual effect of the variable on the likelihood of requesting disclosure than does the raw odds-ratio. For example, in Table 13, under the column labeled "March raw" and across the rows for "Ethnicity," the number 1.9424 for "Asian" means that when considered alone, Asian examinees were 1.94 times as (or 94 percent more than) likely to request disclosure as were white examinees. When the other variables were taken into consideration, the number 1.4870 under the "March adjusted" column means that Asian candidates were actually 1.49 times as likely to request disclosure as were white candidates. In the following paragraphs, the effects of each of the independent variables will be discussed separately. The statistical significance of each of these estimated effects is presented in Table 14.

Ethnic Identification

In Table 13, it is evident that the effect of ethnicity on requesting differs for the March and May administration cohorts. For the March cohort the pattern of odds-ratios is very similar for both the raw and the adjusted estimates, in that blacks and other minorities were much less likely than whites to request disclosure, whereas Asians were 1.49 times as likely to request disclosure as whites. However, the results for the May cohort are quite different; the adjusted odds-ratios show that blacks, Asians and other minorities all requested disclosure at a higher rate than comparable white examinees. Indeed, the black category in the May sample is a good illustration of the difference between using raw and adjusted odds-ratios. The raw odds-ratios suggest that blacks requested at the same or slightly lower rate than did whites. The adjusted odds-ratios, however, reveal that blacks were actually 47 percent more likely to request disclosure than were *comparable* whites.

Parental Income

For parental income, a categorical indicator of need for financial aid in college was used as a proxy to maintain a greater sample size. The correlation between this indicator and parental income was relatively high (.46, .52, and .46 for the March, May, and June administration cohorts, respectively), but the missing data rate for need for financial aid was only about 22 percent, as compared with the missing data rate for parental income, which was about 39 percent. Table 13 shows that the effect of financial need on the likelihood of requesting disclosure was quite consistent. If an examinee stated that financial aid was needed in order to attend college, then he or she was almost half as likely to request disclosure than if there were no financial need. The raw and adjusted odds-ratio were quite similar.

Parental Education

The indicator of parental education was father's education, a variable highly correlated with mother's education for all administration cohorts (.54, .55, and .53 for March, May, and June, respectively). Both the raw and the adjusted odds-ratios in Table 13 tell the same story here: There was an increasing trend in requesting rates with greater parental education. The adjusted odds-ratios for both the March and May administration cohorts exhibited slightly less variance across the categories than did the raw odds-ratios.

Academic Achievement: Class Rank

In Table 13, the raw odds-ratios are seen to give an exaggerated picture of the difference in requesting disclosure rates between the categories of class rank. For example, the raw odds-ratio suggests that examinees in the highest category of class rank were 4.12 times as likely, following the March administration, and 4.63 times as likely, following the May administration, to request disclosure as were examinees in the lowest class-rank category. The adjusted odds-ratios reveal that a substantial portion of this effect is caused by the confounding effect of other variables. In fact, holding the other five variables fixed, examinees in the highest class rank category were only 2.3 times as likely, following the March administration, and 2.5 times as likely, following the May administration, to request disclosure as were similar examinees in the lowest class-rank category. This effect is seen for all categories of class rank and for both the March and the May administration cohorts. Both analyses, however, reveal a systematic and increasing trend in the rate of requesting disclosure as class rank increases.

Academic Achievement: SAT-M Score

Again there is an exaggerated relationship shown by the raw odds-ratios when compared with the adjusted odds-ratios. For both March and May administration cohorts the raw

odds-ratios indicated that examinees scoring in the 640-800 range were more than four times as likely to request disclosure as were those in the 210-430 range. The adjusted odds-ratios reveal that, for examinees who were comparable in terms of the other five variables, this factor was much smaller (i.e., 2.17). Furthermore, the trends over score groups were different for raw and adjusted odds-ratios. The raw odds-ratios increased steadily, while there was a definite deceleration in the adjusted odds-ratios.

Academic Aspirations

These results are quite consistent for both administration cohorts. Both sets of raw odds-ratios were much larger than their corresponding adjusted values. Examinees who indicated that they aspired to the doctorate were more likely to request disclosure than those who indicated than they did not so aspire. The raw odds-ratios, however, inflated the strength of this relationship.

5. CONCLUSIONS

The purpose of this study was, first, to describe differences between examinees who requested disclosure and those who did not and, second, to determine what the likelihood of requesting disclosure was for different examinee subgroups. To answer these questions, several analyses were undertaken. First, univariate comparisons between requestors and nonrequestors were made on all indicators available from the SDQ and the SAT registration form, and on SAT-Verbal and -Mathematical scores. Because so many differences were observed, linear multiple regression analyses were conducted to further screen the variables. Finally, multiple contingency table analyses were conducted, using a limited number of variables, to determine the comparative likelihood of different examinee subgroups to request disclosure materials. In general, the findings are as follows.

1. Very few examinees, less than 5 percent, requested the disclosure materials available to SAT examinees following the March, May, and June 1980 SAT administrations in New York. Fewer examinees requested disclosure materials following the June administration (1.7 percent) than following either the March (7.4 percent) or May (5.4 percent) administrations.

2. The vast majority of examinees for these SAT administrations in New York were eleventh-grade students, and a higher proportion of requestors (96.9 percent), than nonrequestors (86.9 percent) were eleventh graders.

3. Requestors differed from nonrequestors on about 75 percent of the univariate comparisons made, including differences in measures of background characteristics, school environments, academic achievement, academic aspirations, self-perception, academic expectations, and participation in high school activities.

4. Multiple regression analyses were conducted to identify variables that consistently and independently distinguished requestors from nonrequestors. From these analyses it was found that more requestors than nonrequestors reported higher parental education, higher family income, and an Asian ethnic identity.

5. With ten background characteristics controlled, no differences were found in the size or type of high school attended by requestors as compared with nonrequestors.

6. With ten background characteristics and five school environment variables controlled, it was found that requestors reported higher class rank than nonrequestors.

7. With background characteristics, school environment, and three academic achievement variables controlled, requestors were found to have reported higher academic aspirations than nonrequestors.

Despite these differences between requestors and nonrequestors, however, there was still the question of differences in the likelihood of requesting disclosure for different examinee subgroups. This question was answered by the multiple contingency table analysis, from which the following results were obtained.

8. Controlling for parental education, income, achievement, and aspirations, black examinees and other non-Asian minority examinees were less likely than white examinees to order disclosure materials following the March administration, while Asian examinees were 1.49 times as likely to order disclosure materials than white examinees were. In May, however, the picture changed, and *all* ethnic minorities were more likely than white examinees to order the materials.

9. Controlling for parental education, ethnicity, achievement, and aspirations, financial considerations did affect requesting disclosure, with those examinees who indicated that they would seek financial aid for college attendance about half as likely to seek disclosure as examinees who would not need financial aid.

10. Controlling for ethnicity, income, achievement, and aspirations, those examinees whose parents were more educated were also more likely to request test disclosure. Those whose fathers attained less than a bachelor's degree were no more than 70 percent as likely to request disclosure as those with a bachelor's, and those whose fathers had attended graduate school or had attained a doctoral or professional degree were 1.25 times as likely to request disclosure as those with a bachelor's degree.

11. Other things being equal, examinees with higher SAT-M scores were more likely to request disclosure than those with lower SAT-M scores.

12. Other things being equal, examinees' self-reported class standing affected requesting, with the likelihood of requesting increasing with higher class rank; examinees who reported themselves to be in the highest tenth of their classes were about 2.5 times as likely to request disclosure as those who reported themselves to be in the middle fifth, or lower, of their class.

13. Other things being equal, examinees who reported

doctoral or professional aspirations were about 1.6 times as likely to request disclosure as were those who reported aspiring no higher than a master's degree.

In contrast to those who argued that test disclosure legislation would tend to have socially equalizing consequences, the authors speculated that test disclosure materials might be disproportionately utilized by already advantaged groups. These speculations were largely confirmed by the findings that students not needing financial aid to attend college (the financially advantaged) and children of more educated fathers (the educationally advantaged) were more likely to request the materials. In addition, the authors speculated that test disclosure materials might be disproportionately utilized by those for whom the materials would have a direct utility: preparation for retest, checking of scoring errors, or satisfaction of curiosity regarding some presumably disadvantaging characteristic of the test, such as bias in language. Although these speculations were not tested directly, the findings may touch on two of these points. First, the finding that a larger proportion of requestors than nonrequestors were eleventh-grade students suggests that—if eleventh-grade students typically retest—requestors were more likely to retest. It might be concluded that the materials were to be used in preparation for a retest. Second, the fact that neither women nor examinees reporting non-Asian ethnic status were more likely to consistently request disclosure materials than men or whites, respectively, suggests that curiosity regarding bias in the language of the test was *not* an important determinant of test disclosure use.

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Table 1. Description of Variables Used in Univariate Comparisons

Variable	*Description*
SAT-M	SAT-Mathematical score (200-800)
SAT-V	SAT-Verbal score (200-800)
ADMIN	Number of times examinee had taken SAT
AGE	Age of examinee (in months)
SEX	Examinee sex (1 = male; 2 = female)
EDLEVEL	Current grade in which examinee is enrolled (9-14 and other)
QUEST1	Availability for Student Search Service (1 = yes; 2 = no)
QUEST2	Type of high school (1 = public; 2 = other than public)
QUEST3	Type of high school program (1 = academic or college prep; 2 = general; 3 = career-oriented; 4 = other)
QUEST4	Size of high school class (1 = fewer than 100, 2 = 100-249; 3 = 250-499; 4 = 500-749; 5 = 750 or more)
QUEST5	Most recent high school rank (1 = highest tenth: 2 = second tenth; 3 = second fifth; 4 = middle fifth; 5 = fourth fifth; 6 = lowest fifth)
QUEST6	Expected years of English courses completed before high school graduation
QUEST7	Expected years of mathematics courses completed before high school graduation
QUEST8	Expected years of foreign language courses completed before high school graduation
QUEST9	Expected years of biological science courses completed before high school graduation
QUEST10	Expected years of physical science courses completed before high school graduation
QUEST11	Expected years of social studies courses completed before high school graduation
QUEST12	Latest year-end or mid-year grade in English: (1 = excellent [90-100 or A]; 2 = good [80-89 or B]; 3 = fair [70-79 or C]; 4 = passing [60-69 or D]; 5 = failing [59 or below or F])
QUEST13	Latest year-end or mid-year grade in mathematics (See QUEST12 for categories)
QUEST14	Latest year-end or mid-year grade in foreign languages (see QUEST12 for categories)
QUEST15	Latest year-end or mid-year grade in biological sciences (See QUEST12 for categories)
QUEST16	Latest year-end or mid-year grade in physical sciences (See QUEST12 for categories)
QUEST17	Latest year-end or mid-year grade in social studies (See QUEST12 for categories)
QUEST18A	Plan to apply for advanced placement in English (1 = yes; 2 = no)
QUEST18B	Plan to apply for advanced placement in mathematics (1 = yes; 2 = no)
QUEST18C	Plan to apply for advanced placement in foreign languages (1 = yes; 2 = no)
QUEST18D	Plan to apply for advanced placement in biological sciences (1 = yes; 2 = no)
QUEST18E	Plan to apply for advanced placement in physical sciences (1 = yes; 2 = no)
QUEST18F	Plan to apply for advanced placement in social studies (1 = yes; 2 = no)
QUEST18G	Plan to apply for advanced placement in art/music (1 = yes; 2 = no)
QUEST19	Hours per week working in a part-time job (0 to 33 hours)
QUEST20	Participation in community or church activities while in high school (1 = not a member; 2 = have belonged; 3 = active in 1-2 groups; 4 = active in 2 or more groups; 5 = held a major office)
QUEST21	Participation in athletics in or out of high school (1 = none; 2 = intramural; 3 = one or more varsity teams; 4 = earned 1 or more varsity letters in single sport; 5 = earned 1 or more varsity letters in more than one sport)
QUEST22	Participation in clubs and organizations in high school (1 = not a member; 2 = been a member; 3 = held one or two major offices; 4 = held three or four major offices; 5 = held five or more major offices)
QUEST23	Honors or awards received in high school (1 = none; 2 = one or two; 3 = three or four; 4 = five or six; 5 = seven or more)
QUEST24	Highest level of education expected to be completed beyond high school: (1 = 2-year special training; 2 = 2-year associate degree; 3 = bachelor's degree; 4 = master's degree; 5 = doctor's degree; 6 = undecided [coded as missing])
QUEST27	Plan to apply for financial aid at any college (1 = yes; 2 = no)
QUEST28	Expected attendance at college (1 = full-time; 2 = part-time)
QUEST29	Expected attendance at college (1 = day; 2 = evening)
QUEST30	Residential preference for first 2 years in college (1 = at home; 2 = single-sex dorm; 3 = coed dorm; 4 = fraternity or sorority house; 5 = on-campus apartment; 6 = off-campus apartment)
QUEST31	United States citizen (1 = yes; 0 = no)
QUEST32	Veteran of United States Armed Forces (1 = yes; 0 = no)
QUEST34	Presently enrolled in college (1 = yes; 2 = no)
QUEST35	GPA at college, for college attendees (1 = 3.5 or above; 2 = 3.0-3.4; 3 = 2.5-2.9; 4 = 2.0-2.4; 5 = 1.5-1.9; 6 = below 1.5; 7 = not applicable)
QUEST36	Transfer to new college at what level, for college attendees (freshman to senior)
QUEST37	Ethnicity (1 = American Indian or Alaskan; 2 = black; 3 = Mexican American; 4 = Oriental; 5 = Puerto Rican; 6 = white or caucasian; 7 = other)
QUEST38	English-language proficiency (1 = English is best language; 2 = English is not best language)
QUEST39	Highest level of education completed by father or male guardian (1 = grade school; 2 = some high school; 3 = high school diploma; 4 = business or trade school; 5 = some college; 6 = bachelor's degree; 7 = some graduate or professional school; 8 = graduate or professional degree)
QUEST40	Highest level of education completed by mother or female guardian (see QUEST39 for categories)

Table 1 (cont.). Description of Variables Used in Univariate Comparisons

Variable	*Description*
QUEST41	Number of dependents financially supported by parents (1 = two; 2 = three; 3 = four; 4 = five; 5 = six; 6 = seven; 7 = eight; 8 = nine or more)
QUEST42	Number of dependents financially supported by parents once examinee is in college (1 = one; 2 = two; 3 = three; 4 = four; 5 = five or more)
QUEST43	Income of parents in dollars (15 income categories, ranging from less than $3,000 to $50,000 a year or more, recoded to the dollar midpoint of the range of each category)
QUEST44A	Expected need for college counseling about educational plans and opportunities (1 = need; 0 = no need)
QUEST44B	Expected need for college counseling about vocational or career plans and opportunity (1 = need; 0 = no need)
QUEST44C	Expected need for college help in improving mathematical ability (1 = need; 0 = no need)
QUEST44D	Expected need for college help in finding a part-time job (1 = need; 0 = no need)
QUEST44E	Expected need for college counseling about personal problems (1 = need; 0 = no need)
QUEST44F	Expected need for college help in increasing reading ability (1 = need; 0 = no need)
QUEST44G	Expected need for college help in developing good study habits (1 = need; 0 = no need)
QUEST44H	Expected need for college help in improving writing ability (1 = need; 0 = no need)
QUEST45A	Participation in high school athletics (1 = yes; 0 = no)
QUEST45B	Participation in high school ethnic or racial activities or organizations (1 = yes; 0 = no)
QUEST45C	Participation in high school journalism, debating, or dramatic activities (1 = yes; 0 = no)
QUEST45D	Participation in high school art, music, or dance activities (1 = yes; 0 = no)
QUEST45E	Participation in religious activities or organizations in high school (1 = yes; 0 = no)
QUEST45G	Participation in social clubs or community activities in high school (1 = yes; 0 = no)
QUEST45H	Participation in high school student government (1 = yes; 0 = no)
QUEST46A	Plan to participate in college athletics (1 = yes; 0 = no)
QUEST46B	Plan to participate in ethnic or racial activities or organizations in college (1 = yes; 0 = no)
QUEST46C	Plan to participate in journalism, debating, or dramatic activities in college (1 = yes; 0 = no)
QUEST46D	Plan to participate in art, music, or dance in college (1 = yes; 0 = no)
QUEST46E	Plan to participate in preprofessional clubs in college (1 = yes; 0 = no)
QUEST46F	Plan to participate in religious activities or organizations in college (1 = yes; 0 = no)
QUEST46G	Plan to participate in social clubs or community organizations in college (1 yes; 0 = no)
QUEST46H	Plan to participate in student government in college (1 = yes; 0 = no)
QUEST47	Self-perception of acting ability (1 = highest 1 percent of age cohort; 2 = highest 10 percent of age cohort; 3 = above average; 4 = average ability; 5 = below average)
QUEST48	Self-perception of artistic ability (See QUEST47 for categories)
QUEST49	Self-perception of athletic ability (See QUEST47 for categories)
QUEST50	Self-perception of creative writing ability (See QUEST47 for categories)
QUEST51	Self-perception of ability to get along with others (See QUEST47 for categories)
QUEST52	Self-perception of leadership ability (See QUEST47 for categories)
QUEST53	Self-perception of mathematical ability (See QUEST47 for categories)
QUEST54	Self-perception of mechanical ability (See QUEST47 for categories)
QUEST55	Self-perception of musical ability (See QUEST47 for categories)
QUEST56	Self-perception of ability to organize work (See QUEST47 for categories)
QUEST57	Self-perception of sales ability (See QUEST47 for categories)
QUEST58	Self-perception of scientific ability (See QUEST47 for categories)
QUEST59	Self-perception of ability in spoken expression (See QUEST47 for categories)
QUEST60	Self-perception of ability in written expression (See QUEST47 for categories)
INSTITUT	Aspiration to highly selective undergraduate institution (1 = SAT scores sent to highly selective undergraduate institution; 0 = other)

Table 2. Summary of Univariate Comparisons between All Requestors and a Same-Size Random Sample of Nonrequestors

Variable Name	*Comparison of Requestors with Nonrequestors*	*Level of Statistical Significance*		
		March	*May*	*June*
1. Variables for which statistically significant differences ($p < .05$) were found for all three administration cohorts				
SAT-M	More requestors (R's) obtained higher SAT-Mathematical scores	<.01	<.01	<.01
SAT-V	More R's obtained higher SAT-Verbal scores	<.01	<.01	<.01
ADMIN	Fewer R's had taken the SAT one time only in May and June; more R's had taken SAT one time only in March[a]	<.01	<.01	<.01
AGE	More R's were younger	<.01	<.01	<.01
EDLEVEL	More R's were 11th graders	<.01	<.01	<.01
QUEST3	More R's were enrolled in academic or college-preparatory high school programs	<.01	<.01	<.01
QUEST5	More R's reported higher class rank	<.01	<.01	<.01
QUEST7	More R's expected to complete four or more years of mathematics before high school graduation	<.01	<.01	<.01
QUEST8	More R's expected to complete four or more years of foreign language before high school graduation	<.01	<.01	<.01
QUEST9	More R's expected to complete two or more years of biological sciences before high school graduation	<.01	<.01	<.01
QUEST10	More R's expected to complete three or more years of physical sciences before high school graduation	<.01	<.01	<.01
QUEST12	More R's reported receiving "A" grades in English	<.01	<.01	<.01
QUEST13	More R's reported receiving "A" grades in mathematics	<.01	<.01	<.01
QUEST14	More R's reported receiving "A" grades in foreign language	<.01	<.01	<.01
QUEST15	More R's reported receiving "A" grades in biological sciences	<.01	<.01	<.01
QUEST16	More R's reported receiving "A" grades in physical sciences	<.01	<.01	<.01
QUEST17	More R's reported receiving "A" grades in social sciences	<.01	<.01	<.01
QUEST18A	More R's planned to apply for advanced placement in English	<.01	<.01	<.01
QUEST18B	More R's planned to apply for advanced placement in mathematics	<.01	<.01	<.01
QUEST18C	More R's planned to apply for advanced placement in a foreign language	<.01	<.01	<.05
QUEST18D	More R's planned to apply for advanced placement in biological sciences	<.01	<.01	<.01
QUEST18E	More R's planned to apply for advanced placement in physical sciences	<.01	<.01	<.05
QUEST18F	More R's planned to apply for advanced placement in social sciences	<.01	<.01	<.01
QUEST19	More R's worked fewer hours per week in a part-time job	<.01	<.01	<.01
QUEST22	More R's held one or more major office positions in clubs and organizations; fewer R's did not belong to clubs and organizations	<.01	<.01	<.01
QUEST23	More R's received honors or awards in high school	<.01	<.01	<.01
QUEST24	More R's aspired to a doctor's or professional degree	<.01	<.01	<.01
QUEST30	More R's preferred coed dorm living during first 2 years in college; fewer R's preferred to live at home	<.01	<.01	<.01
QUEST37	More R's were Asian; fewer R's were black	<.01	<.01	<.01
QUEST39	More R's had fathers or male guardians with higher levels of education completed	<.01	<.01	<.01
QUEST40	More R's had mothers or female guardians with higher levels of education completed	<.01	<.01	<.01
QUEST41	More R's had parents who had fewer dependents to support financially	<.01	<.01	<.05
QUEST43	More R's came from households with higher incomes	<.01	<.01	<.01
QUEST44G	Fewer R's needed help developing good study habits from the college they plan to attend	<.01	<.01	<.01
QUEST45B	More R's participated in ethnic or racial activities or organizations while in high school	<.01	<.01	<.01
QUEST45C	More R's participated in journalism, debating, or dramatic activities while in high school	<.01	<.01	<.01
QUEST45E	More R's participated in preprofessional clubs while in high school	<.01	<.01	<.05
QUEST45F	More R's participated in religious activities or organizations while in high school	<.01	<.01	<.01
QUEST45G	More R's participated in social clubs or community organizations while in high school	<.01	<.01	<.01
QUEST45H	More R's participated in student government while in high school	<.01	<.01	<.01
QUEST46B	More R's planned to participate in ethnic or racial activities or organizations in college	<.01	<.01	<.01
QUEST46C	More R's planned to participate in journalism, debating, or dramatic activities in college	<.01	<.01	<.01
QUEST46E	More R's planned to participate in preprofessional clubs in college	<.01	<.01	<.01
QUEST46F	More R's planned to participate in religious activities or organizations in college	<.01	<.01	<.01
QUEST46G	More R's planned to participate in social clubs or community organizations in college	<.01	<.01	<.05
QUEST46H	More R's planned to participate in student government in college	<.01	<.01	<.01
QUEST47	More R's felt they had more acting ability	<.01	<.01	<.01
QUEST50	More R's felt they had more creative writing ability	<.01	<.01	<.01
QUEST51	More R's felt they had more ability to get along with others	<.01	<.01	<.05
QUEST52	More R's felt they had more leadership ability	<.01	<.01	<.01

a. ADMIN is the only variable for which the direction of statistical significance was inconsistent across administration cohorts

Table 2 (cont.). Summary of Univariate Comparisons between All Requestors and a Same-Size Random Sample of Nonrequestors

Variable Name	*Comparison of Requestors with Nonrequestors*	*Level of Statistical Significance*		
		March	*May*	*June*
QUEST53	More R's felt they had more mathematical ability	<.01	<.01	<.01
QUEST54	More R's felt they had more mechanical ability	<.01	<.01	<.01
QUEST55	More R's felt they had more musical ability	<.01	<.01	<.01
QUEST56	More R's felt they had more ability to organize work	<.01	<.01	<.01
QUEST57	More R's felt they had more sales ability	<.01	<.01	<.05
QUEST58	More R's felt they had more scientific ability	<.01	<.01	<.01
QUEST59	More R's felt they had more spoken expression ability	<.01	<.01	<.01
QUEST60	More R's felt they had more written expression ability	<.01	<.01	<.01
INSTITUT	More R's had SAT scores sent to highly selective institutions of higher education	<.01	<.01	<.01
2 Variables for which no statistically significant differences ($p > .05$) were found for all three administration cohorts				
QUEST18G	No difference in plans to apply for advanced placement in art or music	>.20	>.20	>2.0
QUEST31	No difference in U.S. citizenship	>.20	>.20	>.20
QUEST32	No difference in whether or not a veteran of U.S. Armed Forces	> 20	>.20	>.20
QUEST34	No difference in current college enrollment, for students who had attended college	>.20	>.20	>.20
QUEST36	No difference in expectation to transfer credits, for student who had attended college	>.20	>.07	>.20
QUEST44A	No difference in desire for counseling about educational plans and opportunities	>.20	>.20	>.20
QUEST44B	No difference in desire for counseling about vocational/career plans and opportunities	>.20	>.20	>.20
QUEST44E	No difference in desire for counseling about personal problems	>.20	>.20	>.20
QUEST44F	No difference in desire for help in increasing reading ability	>.20	>.20	>.20
QUEST44H	No difference in desire for help in increasing writing ability	>.20	>.20	>.20
QUEST45A	No difference in participation in high school athletics	>.20	>.20	>.20
QUEST46A	No difference in expectation to participate in college athletics	>.20	>.20	>.20

Table 3. Comparisons of Requestors with Nonrequestors on Nine Background Variables

Variable	March		May		June	
	Requestors (N = 2,341)	*Nonrequestors (N = 2,341)*	*Requestors (N = 2,440)*	*Nonrequestors (N = 2,440)*	*Requestors (N = 638)*	*Nonrequestors (N = 638)*
Sex						
Male	1,280	1,281	1,215	1,148	343	296
Female	1,061	1,060	1,225	1,292	295	342
Chi-square	0.0 ($p > .99$)		3.57 ($p < .05$)		6.63 ($p < .01$)	
Missing (percent of total)	(0%)	(0%)	(0%)	(0%)	(0%)	(0%)
Ethnic identity						
American Indian or Alaskan Native	0	11	3	8	4	6
Black or Afro-American or Negro	22	117	53	83	25	37
Mexican American or Chicano	2	2	2	3	0	0
Oriental or Asian-American or Pacific Islander	64	37	101	52	32	10
Puerto Rican	9	34	17	36	5	11
White or caucasian	1,639	1,583	1,683	1,761	429	447
Other	27	40	38	39	19	10
Chi-square	100.17 ($p < .001$)		31.53 ($p < .001$)		19.61 ($p < .002$)	
Missing (percent of total)	578 (24.7%)	517 (22.1%)	543 (22.3%)	458 (18.8%)	124 (19.4%)	117 (18.3%)
English best language						
Yes	1,772	1,774	1,877	1,970	507	510
No	35	58	47	41	16	10
Chi-square	5.04 ($p < .02$)		0.56 ($p < .45$)		1.73 ($p < .19$)	
Missing (percent of total)	534 (22.8%)	509 (2.17%)	516 (21.1%)	429 (17.6%)	113 (17.7%)	118 (18.5%)
Father's education						
Grade school	21	69	44	62	17	24
Some high school	62	157	60	149	24	46
High school diploma	214	443	226	444	70	132
Business or trade school	73	118	81	121	32	46
Some college	248	362	272	372	88	99
Bachelor's college	344	244	346	319	103	54
Some graduate or professional school	129	88	161	110	29	29
Graduate or professional degree	699	339	720	389	156	80
Chi-square	327.92 ($p < .001$)		244.06 ($p < .001$)		69.99 ($p < .001$)	
Missing (percent of total)	551 (22.5%)	521 (22.2%)	530 (21.7%)	474 (19.4%)	119 (18.7%)	128 (20.1%)
Mother's education						
Grade school	16	58	28	49	14	18
Some high school	48	122	56	127	23	41
High school diploma	395	702	436	726	135	218
Business or trade school	111	135	112	159	40	48
Some college	359	301	365	350	88	74
Bachelor's college	331	201	318	212	74	42
Some graduate or professional school	151	94	168	109	45	22
Graduate or professional degree	368	192	417	234	94	49
Chi-square	249.57 ($p < .001$)		198.26 ($p < .001$)		57.90 ($p < .001$)	
Missing (percent of total)	562 (24.0%)	536 (23.0%)	540 (22.1%)	474 (19.4%)	125 (19.6%)	126 (19.7%)

Table 3 (cont.). Comparisons of Requestors with Nonrequestors on Nine Background Variables

Variable	March		May		June	
	Requestors (N = 2,341)	*Nonrequestors (N = 2,341)*	*Requestors (N = 2,440)*	*Nonrequestors (N = 2,440)*	*Requestors (N = 638)*	*Nonrequestors (N = 638)*
Family size						
Two	64	98	55	92	25	28
Three	213	244	266	293	69	82
Four	674	551	708	570	184	145
Five	514	455	512	548	130	148
Six	191	256	206	293	71	56
Seven	81	130	81	119	23	38
Eight	28	51	36	48	9	8
Nine or more	12	35	18	20	2	
Chi-square	63.46 ($p < .001$)		48.34 ($p < .001$)		14.59 ($p < .04$)	
Missing (percent of total)	576 (24.6%)	556 (23.8%)	558 (22.9%)	457 (18.7%)	125 (19.6%)	127(19.9%)
Apply for financial aid						
Yes	1,186	1,462	1,297	1,617	402	428
No	560	360	564	359	112	88
Chi-square	70.01 ($p < .001$)		76.63 ($p < .001$)		3.39 ($p > .07$)	
Missing (percent of total)	595 (25.4%)	519 (22.1%)	579 (23.7%)	464 (19.0%)	124 (19.4%)	122 (19.1%)
Parental income						
Mean in dollars	$33,355	$25,877	$32,333	$26,431	$28,884	$23,686
S.D.	13,743	12,839	13,965	12,841	13,459	11,990
F	235.88 ($p < .001$)		153.51 ($p < .001$)		36.61 ($p < .001$)	
Missing (percent of total)	925 (39.5%)	782 (33.4%)	956 (39.2%)	756 (30.1%)	218 (34.2%)	180 (28.2%)

Table 4. Comparisons of Requestors with Nonrequestors on Four School Environment Variables

Variable	March		May		June	
	Requestors (N = 2,341)	*Nonrequestors (N = 2,341)*	*Requestors (N = 2,440)*	*Nonrequestors (N = 2,440)*	*Requestors (N = 638)*	*Nonrequestors (N = 638)*
High school						
Public	1,393	1,409	1,584	1,579	409	438
Other than public	450	467	377	468	124	93
Chi-square	0.09 ($p < .76$)		7.75 ($p < .01$)		5.07 ($p < .02$)	
Missing (percent of total)	498 (21.3%)	465 (19.9%)	479 (19.6%)	393 (16.5%)	105 (16.5%)	107 (16.8%)
High school class size						
Fewer than 100	157	130	180	127	45	42
100-249	359	400	376	486	104	122
250-499	497	526	541	595	141	143
500-749	402	393	371	395	109	103
750 or more	391	383	458	410	126	102
Chi-square	5.58 ($p < .23$)		27.21 ($p < .001$)		4.08 ($p < .39$)	
Missing (percent of total)	535 (22.9%)	509 (21.6%)	514 (21.1%)	429 (17.6%)	113 (17.8%)	126 (19.7%)
High school program						
College preparatory	1,689	1,437	1,801	1,640	450	393
General	107	264	104	244	53	86
Career oriented	27	144	33	118	20	40
Other	5	5	6	14	4	1
Chi-square	166.68 ($p < .001$)		113.63 ($p < .001$)		20.11 ($p < .001$)	
Missing (percent of total)	513 (21.9%)	491 (21.0%)	496 (20.3%)	424 (17.4%)	111 (17.4%)	118 (18.5%)
Grade						
9	1	1	0	0	0	1
10	15	11	25	17	19	6
11	2,270	1,846	2,378	2,278	601	588
12	22	382	9	87	10	21
1st year college	4	12	1	1	1	0
2nd year college	2	8	0	1	0	0
Other	11	49	7	20	4	10
Chi-square	396.70 ($p < .001$)		74.25 ($p < .001$)		15.31 ($p < .01$)	
Missing (percent of total)	16 (.7%)	33 (1.4%)	20 (.8%)	36 (1.5%)	3 (.5%)	12 (2.0%)

Table 5. Comparisons of Requestors with Nonrequestors on Five Academic Variables

Variable	March		May		June	
	Requestors (N = 2,341)	*Nonrequestors (N = 2,341)*	*Requestors (N = 2,440)*	*Nonrequestors (N = 2,440)*	*Requestors (N = 638)*	*Nonrequestors (N = 638)*
SAT-Verbal						
Mean	502.0	437.8	495.4	438.9	474.6	423.0
S.D.	106.4	107.8	101.9	101.7	107.0	91.9
F	421.01 ($p < .001$)		374.82 ($p < .001$)		85.29 ($p < .001$)	
Missing (percent of total)	4 (.1%)	3 (.1%)	2 (.08%)	(0%)	1 (.1%)	(0%)
SAT-Mathematical						
Mean	562.4	481.0	547.8	477.8	528.1	469.2
S.D.	103.3	114.6	106.7	108.5	112.4	108.2
F	625.65 ($p < .001$)		515.50 ($p < .001$)		91.06 ($p < .001$)	
Missing (percent of total)	(0%)	2 (.08%)	3 (.1%)	1 (.04%)	(0%)	(0%)
Class rank						
Highest tenth	650	334	729	361	181	88
Second tenth	458	376	471	416	116	109
Second fifth	373	452	370	551	107	142
Middle fifth	193	498	224	513	84	145
Fourth fifth	16	62	12	60	5	11
Lowest fifth	1	12	1	4	0	5
Chi-square	285.57 ($p < .001$)		307.98 ($p < .001$)		60.74 ($p < .001$)	
Missing (percent of total)	648 (27.7%)	607 (25.9%)	633 (25.9%)	535 (21.9%)	145 (22.7%)	138 (21.6%)
Latest grade in English						
A	956	605	1,088	684	235	161
B	727	866	698	1,008	224	270
C	104	340	127	290	48	81
D	10	31	6	31	8	10
Chi-square	226.73 ($p < .001$)		226.93 ($p < .001$)		26.73 ($p < .001$)	
Missing (percent of total)	544 (23.2%)	499 (21.3%)	521 (21.4%)	427 (17.5%)	123 (19.3%)	116 (18.2%)
Latest grade in mathematics						
A	995	561	1,107	636	254	148
B	587	747	557	768	164	214
C	184	412	211	509	78	123
D	31	112	32	103	16	38
Chi-square	273.03 ($p < .001$)		318.77 ($p < .001$)		53.49 ($p < .001$)	
Missing (percent of total)	544 (23.2%)	509 (21.7%)	533 (21.8%)	424 (17.4%)	126 (19.7%)	115 (18.0%)

Table 6. Names and Definitions of Variables Used in Multiple Regression Analyses

Variable	*Description*
Sex	Indicator (1 = female; 0 = male)
Asian	Indicator (1 = Asian; 0 = all others)
Black	Indicator (1 = black; 0 = all others)
Other minority	Indicator (1 = American Indian, Alaskan, Mexican American, Puerto Rican, other; 0 = Asian, black, white)
English language	Indicator (1 = English is best language; 0 = English is not best language)
Father's education	Highest level of education completed by father or male guardian (8-point scale: 1 = grade school; 8 = professional or graduate degree)
Mother's education	Highest level of education completed by mother or female guardian (8-point scale: 1 = grade school; 8 = professional or graduate degree)
Family size	Number of dependents that parents financially support; (8-point scale: 1 = two; 8 = nine or more)
Family income	Approximate income of parents before taxes, in dollars ($3,000 to $50,000 a year or more)
Financial aid	Indicator of plan to apply for financial aid at any college (1 = no plans; 0 = plans)
School type	Indicator (1 = public school; 2 = school other than public)
School size	Number of students in high school class (5-point scale: 1 = fewer than 100; 5 = 750 or more)
Program type	Indicator (1 = academic or college preparatory high school program; 0 = other)
Grade < 11	Indicator (1 = grade less than or equal to 10; 0 = other)
Grade > 11	Indicator (1 = grade greater than or equal to 12; 0 = other)
SAT-V	Score on verbal sections of SAT
SAT-M	Score on mathematical sections of SAT
Class rank	Class rank (6-point scale: 1 = top 10 percent; 6 = bottom 20 percent)
Academic aspirations	Indicator (1 = aspiration to doctor's or professional degree; 0 = other)
Self-perceptions	Sum of responses to 14 self-perception items (14 = positive perceptions; 70 = negative perceptions)
Academic expectations	Years of coursework in five academic subjects expected to be completed by high school graduation
Extracurricular activities	Number of types of activities participated in during high school

Table 7. Means and Standard Deviations of Variables Used in Multiple Regression Analyses

Variable	March		May		June	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Requestor status	.484	.500	.483	.500	.492	.500
Sex	.446	.497	.514	.500	.481	.500
Asian	.028	.166	.039	.193	.042	.201
Black	.037	.189	.035	.183	.052	.223
Other minority	.036	.187	.036	.186	.054	.225
English language	.977	.151	.979	.142	.976	.153
Father's education	5.386	2.120	5.414	2.102	5.018	2.121
Mother's education	4.800	1.960	4.847	1.980	4.535	1.998
Family size	3.634	1.390	3.613	1.325	3.559	1.365
Family income	$29,540	$13,858	$29,405	$13,424	$26,362	$13,030
Financial aid	.250	.433	.220	.414	.171	.376
School type	1.231	.421	1.204	.403	1.200	.400
School size	3.317	1.217	3.244	1.219	3.271	1.225
Program type	.846	.361	.879	.327	.808	.394
Grade < 11	.100	.301	.007	.081	.016	.124
Grade > 11	.005	.074	.018	.134	.021	.144
SAT-V	467.993	107.635	471.787	102.065	452.835	97.378
SAT-M	525.944	113.836	520.802	110.459	502.934	109.394
Class rank	1.847	.802	1.813	.779	1.856	.777
Academic aspirations	.282	.450	.290	.454	.244	.430
Self-perceptions	41.862	8.680	41.653	8.634	42.193	8.409
Academic expectations	14.056	2.813	14.236	2.501	13.735	2.522
Extracurricular activities	2.721	1.560	2.746	1.580	2.591	1.579
Number of cases with complete data	2,372		2,568		709	

Table 8. Differences between Requestors and Nonrequestors on Demographic and Background Characteristics

	The Dependent Variable Is Requestor Status		
Independent Variables	*March*	*May*	*June*
Sex	.020	−.023	−.059
	(1.034)	(−1.233)	(−1.614)
Asian	.050*	.105***	.143***
	(2.450)	(5.298)	(3.756)
Black	−.088***	.015	.033
	(−4.462)	(0.796)	(0.882)
Other minority	−.041*	.010	.046
	(−2.098)	(0.533)	(1.247)
English language	.025	−.004	.022
	(1.228)	(0.202)	(0.588)
Father's education	.166***	.106***	.090
	(6.518)	(4.334)	(1.917)
Mother's education	.083***	.091***	.100*
	(3.501)	(3.971)	(2.280)
Family size	−.075***	−.070***	−.060
	(−3.880)	(−3.622)	(−1.596)
Family income	.129***	.133***	.164***
	(4.990)	(5.272)	(3.449)
Financial aid	.001	.018	−.042
	(0.042)	(0.842)	(−1.018)
R^2	.125	.084	.086
R^2 (adjusted)	.122	.081	.073
N	2,372	2,568	709

Note: The numbers in the table are standardized regression coefficients (Beta); their associated *t*-value is in parentheses below.
***$p < .001$
**$p < .01$
*$p < .05$

Table 9. Differences between Requestors and Nonrequestors in School Environments, Holding Constant Demographic and Background Variables

	The Dependent Variable Is Requestor Status		
Independent Variables	*March*	*May*	*June*
School type	−.004	−.015	.097*
	(−0.185)	(−0.720)	(2.452)
School size	.013	.015	.027
	(0.619)	(0.740)	(0.689)
Program type	.082***	.129***	.070
	(4.080)	(6.719)	(1.895)
Grade < 11	.006	.015	.032
	(0.338)	(0.798)	(0.875)
Grade > 11	−.169***	−.073***	−.071
	(−7.883)	(−3.804)	(−1.921)
R^2	.161	.109	.106
R^2 (adjusted)	.155	.103	.087
N	2,372	2,568	709

Note: The numbers in the table are standardized regression coefficients (Beta); their associated *t*-value is in parentheses below. The effects of examinee sex, ethnicity, English-language proficiency, parental education, and family income were included in these regression analyses but are not reported in this table.
***$p < .001$
**$p < .01$
*$p < .05$

Table 10. Differences between Requestors and Nonrequestors in Academic Areas, Holding Constant Demographic, Background, and School Environment Variables

	The Dependent Variable Is Requestor Status		
Independent Variables	*March*	*May*	*June*
SAT-V	−.042	.036	.008
	(−1.575)	(1.418)	(0.158)
SAT-M	.139***	.121***	.095
	(4.661)	(4.496)	(1.877)
Class rank	−.105***	−.131***	−.100*
	(−4.357)	(−5.577)	(−2.346)
R^2	.189	.159	.131
R^2 (adjusted)	.183	.153	.108
N	2,372	2,568	709

Note: The numbers in the table are standardized regression coefficients (Beta); their associated *t*-value is in parentheses below. The effects of examinee sex, ethnicity, English-language proficiency, parental education, family income, size and type of high school, type of high school program and grade level were included in these regression analyses but are not reported in this table. The R^2 is for the entire set of independent variables.

***$p < .001$
**$p < .01$
*$p < .05$

Table 11. Differences between Requestors and Nonrequestors in Attitudes and Activities, Holding Constant Demographic, Background, School Environment, and Achievement Variables

	The Dependent Variable Is Requestor Status		
Independent Variables	*March*	*May*	*June*
Academic aspirations	.061**	.056**	.103**
	(2.997)	(2.739)	(2.597)
Self-perceptions	−.027	−.023	−.021
	(−1.127)	(−0.993)	(−0.466)
Academic expectations	.106***	.039	.048
	(4.457)	(1.724)	(1.079)
Extracurricular activities	.084***	.053*	.065
	(3.774)	(2.497)	(1.571)
R^2	.212	.169	.150
R^2 (adjusted)	.205	.162	.122
N	2,372	2,568	709

Note: The numbers in the table are standardized regression coefficients (Beta); their associated *t*-value is in parentheses below. The effects of examinee sex, ethnicity, English-language proficiency, parental education, family income, size and type of high school, type of high school program, grade level, SAT-V, SAT-M, and class rank were included in these regressions but are not included in this table. The R^2 is for the entire set of independent variables.

***$p < .001$
**$p < .01$
*$p < .05$

Table 12. Names and Descriptions of Categories for Variables Used in Multiple Contingency Table

Variables	*Categories*
Ethnic identification	Black, Asian, white, and other
Need for financial aid	Yes = need for financial aid No = no need for financial aid
Parental education	Father with high school diploma Father with some college Father with bachelor's degree Father with some graduate school, master's, doctoral, or professional degree
Class rank	Highest tenth, second tenth, second fifth, middle fifth, or lower
SAT-Mathematical score	210-430, 440-500, 510-560, 570-630, 640-800
Academic aspirations	Yes = aspiration to doctoral or professional degree No = no aspiration to doctoral or professional degree

Table 13. Likelihood of Examinee's Requesting Disclosure Materials after March and May 1980 SAT Administrations for Six Examinee Subgroups

	March Odds-Ratios		*May Odds-Ratios*	
Variable	*Raw*	*Adjusted*	*Raw*	*Adjusted*
Ethnic identification				
Asian	1.9424	1.4870	2.1683	1.8467
Black	.2094	.2368	.8961	1.4659
Other minority	.7246	.6396	.7978	1.0300
White	*1*	*1*	*1*	*1*
Need for financial aid				
Need	.5612	.6520	.5405	.5828
No need	*1*	*1*	*1*	*1*
Father's education				
High school diploma	.4106	.5019	.4826	.5674
Some college	.7730	.7067	.6526	.7182
Bachelor's degree	*1*	*1*	*1*	*1*
Graduate school	1.4100	1.2588	1.5346	1.2640
Class rank				
High tenth	4.1156	2.2822	4.6280	2.5128
Second tenth	2.8912	1.9376	2.6426	1.7946
Second fifth	1.9274	1.6515	1.6136	1.2670
Middle fifth or less	*1*	*1*	*1*	*1*
SAT-M				
210-430	*1*	*1*	*1*	*1*
440-500	1.7668	1.4600	1.7240	1.4987
510-560	2.4436	1.4981	2.2254	1.6680
570-630	3.5563	1.8330	3.2580	2.0558
640-800	4.5873	1.7745	4.4552	2.1666
Educational aspiration				
Aspires to doctorate	2.5454	1.7608	2.5376	1.5826
Does not aspire to doctorate	*1*	*1*	*1*	*1*

Table 14. Difference in Likelihood Ratio Table for March and May Administrations

	(1) Likelihood Statistics	*(2) D.F.*	*(3) Difference in Likelihood*	*(4) Difference in D.F.*	*(5) (3) ÷ (4)*
Base model					
March	1159.45	2,438	–	–	–
May	1297.59	2,438	–	–	–
Ethnic identification					
March	1180.61	2,441	21.16***	3	7.05
May	1308.93	2,441	11.34**	3	3.78
Need for financial aid					
March	1179.43	2,439	19.98***	1	19.98
May	1331.90	2,439	34.31***	1	34.31
Parental education					
March	1232.77	2,441	73.32***	3	24.44
May	1366.13	2,441	68.54***	3	22.85
Class rank					
March	1193.31	2,441	33.86***	3	11.29
May	1355.32	2,441	57.73***	3	19.24
SAT-Mathematical score					
March	1178.00	2,442	18.55***	4	4.64
May	1337.68	2,442	40.09***	4	10.02
Academic aspirations					
March	1193.17	2,439	33.72***	1	33.72
May	1324.73	2,439	27.17***	1	27.14

***$p < .001$
**$p < .01$
*$p < .05$

Appendix A-1. Comparison of Total March Administration Sample with Eleventh-Grade No-Missing-Data Sample on Six Variables

Variable	Total Sample				Eleventh-Grade Sample			
	Nonrequestors (N = 2,341)		Requestors (N = 2,341)		Nonrequestors (N = 1,263)		Requestors (N = 1,486)	
	N	%[a]	N	%[a]	N	%	N	%
Ethnic identification								
Total respondents[b]	1,824		1,763		1,263		1,486	
Asian	37	2	64	4	22	2	51	3
Back	117	6	22	1	36	3	9	1
Other minority	87	5	38	2	37	3	32	2
White	1,583	87	1,639	93	1,168	92	1,394	94
Missing	517	(22)[c]	578	(25)[c]	–	–	–	–
Need for financial aid								
Total respondents	1,822		1,746		1,263		1,486	
Need for aid	1,462	80	1,186	68	993	79	1,001	67
No need for aid	360	20	560	32	270	21	485	33
Missing	519	(22)[c]	595	(25)[c]	–	–	–	–
Father's education								
Total respondents	1,820		1,790		1,263		1,486	
High school diploma	669	37	297	17	403	32	240	16
Some college	480	26	321	18	324	26	269	18
Bachelor's degree	244	13	344	19	200	16	290	20
Graduate/prof. school	427	24	828	46	336	26	687	46
Missing	521	(22)[c]	551	(24)[c]	–	–	–	–
Class rank								
Total respondents	1,734		1,693		1,263		1,486	
High tenth	334	19	650	38	277	22	570	38
Second tenth	376	22	458	27	285	23	412	28
Second fifth	452	26	373	22	331	26	319	22
Middle fifth or less	572	33	212	13	370	29	185	12
Missing	607	(26)[c]	648	(28)[c]	–	–	–	–
SAT-M								
Total respondents	2,339		2,341		1,263		1,486	
210-430	859	37	290	12	350	28	172	12
440-500	485	21	367	16	258	20	224	15
510-560	435	19	495	21	264	21	317	21
570-630	311	13	561	24	214	17	374	25
640-800	249	10	628	27	177	14	399	27
Missing (percent of total)	2	(.08)[c]	0	0	–	–	–	–
Educational aspirations								
Total respondents	1,447		1,542		1,263		1,486	
Aspires to doctoral or professional degree	370	26	728	47	259	21	589	40
Does not aspire	1,077	74	814	53	1,004	79	897	60
Missing (includes "don't know")	894	(38)[c]	799	(34)[c]	–	–	–	–

a. All percentages are based on total respondents by item unless otherwise noted.
b. Total respondents for each question listed separately.
c. Percent based on N = 2,341.

Appendix A-2. Comparison of Total May Administration Sample with Eleventh-Grade No-Missing-Data Sample on Six Variables

Variable	Total Sample				Eleventh-Grade Sample			
	Nonrequestors (N = 2,440)		Requestors (N = 2,440)		Nonrequestors (N = 1,652)		Requestors (N = 1,627)	
	N	%[a]	N	%[a]	N	%	N	%
Ethnic identification								
Total respondents[b]	1,982		1,897		1,652		1,627	
Asian	52	3	101	5	40	3	84	5
Black	83	4	53	3	53	3	46	3
Other minority	86	4	60	3	66	4	51	89
White	1,761	89	1,683	89	1,493	90	1,446	3
Missing	458	(19)[c]	543	(22)[c]	–	–	–	–
Need for financial aid								
Total respondents	1,976		1,861		1,652		1,627	
Need for aid	1,617	82	1,297	70	1,348	82	1,148	71
No need for aid	359	18	564	30	304	18	479	29
Missing	464	(19)[c]	579	(24)[c]	–	–	–	–
Father's education								
Total respondents	1,966		1,910		1,652		1,627	
High school diploma	655	33	330	17	534	32	287	18
Some college	493	25	353	18	421	26	306	19
Bachelor's degree	319	16	346	18	264	16	294	18
Graduate/prof. school	499	25	881	46	443	26	740	45
Missing	474	(19)[c]	530	(22)[c]	–	–	–	–
Class rank								
Total respondents	1,905		1,807		1,652		1,627	
Highest tenth	361	19	729	40	321	20	651	40
Second tenth	416	22	471	26	367	22	425	26
Second fifth	551	29	370	20	478	29	338	21
Middle fifth or less	577	30	237	13	486	29	213	13
Missing	535	(22)[c]	633	(26)[c]	–	–	–	–
SAT-M								
Total respondents	2,439		2,437		1,652		1,627	
210-430	975	40	411	17	584	35	248	15
440-500	522	21	452	18	359	22	301	19
510-560	387	16	406	19	292	18	316	19
570-630	323	13	553	23	243	14	385	24
640-800	232	10	555	23	174	11	377	23
Missing	1	(.04)[c]	3	(.12)[c]	–	–	–	–
Educational aspirations								
Total respondents	1,593		1,653		1,652		1,627	
Aspires to doctoral or professional degree	398	25	761	46	339	20	644	40
Does not aspire	1,195	75	892	54	1,313	80	983	60
Missing (includes "don't know")	847	(35)[c]	787	(32)[c]	–	–	–	–

a. All percents are based on total respondents by item unless otherwise noted.
b. Total respondents for each question listed separately.
c. Percent based on N = 2,440.